GRIST FROM THE MILL FOR OUR VOLUNTEERS
COLVIN RUN MILL HISTORIC SITE
March 2004

Spring is Spectacular

Spring will be most welcome this year. Check out the enclosed Spring Schedule of Activities to find programs for all ages and interests. If you would like to volunteer to help with a particular program, please let Mary Allen know. Information on these programs is also available on our web site www.colvinrunmill.org.

Volunteer Orientation
Saturday March 6 9:30-11am

Over coffee and snacks at Huntley Meadows Park, meet and interact with volunteer docents, gardeners, naturalists and program leaders from the sites and sections of the Resource Management Division. Discover Colvin Run Mill Historic Site's unique place in the Park Authority, and learn about the opportunities and benefits available to volunteers. This training is required for volunteers who have started in the last year, but all volunteers are encouraged to participate and lend their perspective.

Maple Syrup Breakfast
March 13, 9am – 11am

American pancakes and British mills provide a powerful combo at our Volunteer Breakfast on Saturday, March 13. Bring a guest or guests to the Colvin Run Barn for gourmet food, congenial company and Mason Maddox's slides of some intriguing English mills.

When daytime temperatures got into the 40s, Fred Pretty and Mason Maddox collected sap from the site maple trees. They are now boiling it down and reducing the sap to a delicious golden syrup -- 40 gallons of sap makes 1 gallon of syrup. They made enough syrup for everyone at the breakfast to have their hot-off-the-griddle pancakes or French toast swimming in a lake of fresh maple syrup.

VAM Tour
March 21 6:30-8pm

On Sunday evening, March 21, welcome members of the Virginia Association of Museums as they watch Mason grind meal and learn about Colvin Run Mill. Participants will visit the Fairfax Museum and Visitors' Center in Fairfax City; then they will come to Colvin Run Mill for a grinding demonstration and reception catered by Colleen Evans Patton, former site manager. The tour will end at the new Loudoun Heritage Farm Museum in Sterling, Virginia.

What a great opportunity to meet and greet about 200 people from various Virginia museums and answer questions about Colvin Run Mill. If you would like to participate, please sign up in the volunteer room.

A Few Favorite Things
March 26 9am-3:30pm

There are just a few more days to sign up for *A Few Favorite Things: Pleasures and Pastimes in Early America* at George Mason University. Jeanne Niccolls and Susan Clark have recruited authorities from Winterthur, the Colonial Music Institute, the University of South Carolina and the Library Company of Philadelphia to present intriguing insights into how early Americans spent their leisure time.

The $55 registration includes lectures, demonstrations, tabletop displays as well as parking and lunch. Prepaid registration is required by March 14. For more information, contact Susan at 703-631-1429 or susan.clark@fairfaxcounty.gov.

Lake Accotink Outing
Saturday, April 17 9am-1pm

Bring your family and friends to celebrate Volunteer Week with other Resource Management Volunteers at Lake Accotink. Lake Accotink Park's 493 acres includes a 63-acre lake, wetlands and streams offering unique views of waterfowl and marsh life. Facilities and activities vary with the season and include canoe, rowboat and pedal boat rentals, fishing, tour-boat rides, boat launch, bait and tackle sales, 9-green double holed miniature golf course, antique carousel, snack bar, pavilion shelters, picnic areas with grills, restrooms, playground, 4-mile hiking/biking trail and 2 open play fields. Watch April's newsletter for more information.

Arti-Facts from Dawn

Ring It Up
By Dawn Kehrer

Hidden under the cash register drawer, a label led Dawn on a quest to discover more about our cash register. She learned some incriminating facts about the cut-throat cash register business.

When you purchased an item in a store one hundred years ago, chances are you heard a "ka-ching" from the cash register when the sale was completed. So it was most likely with the old cash register that is in the Colvin Run Mill General Store. Visitors are curious about the register and sometimes, when the storekeepers are frustrated with the modern sales computer, they would gladly turn back the clock to use a hand operated system they could trust and understand.

I have uncovered a little information about our cash register. The word "Premium" is scrolled across the front of the cash drawer, probably a reference to the style of the machine. Under the cash drawer, a label says that it was manufactured by the Michigan Machine Company in Detroit, Michigan and sold to the Butler Brothers in Jersey City, New Jersey on October 1, 1923. On a Jersey City website, I found reference to the Butler Brothers. Their 1905 medieval-style building is one of the historic industrial buildings in the Warehouse District of Jersey City. While no mention is made of the nature of the past business, the warehouse currently is used as a distribution center. That is all I have discovered about our register, but I found some information about registers in general and the National Register Company specifically.

Registers were invented in 1879 by James Ritty., a storekeeper in Dayton, Ohio. He based his patented design on a machine he had seen that counted the revolutions of an ocean liner's propeller. He named his machine the "Incorruptible Cashier," giving us a clue as to why such a machine was needed. James Patterson bought the rights to Ritty's invention in 1884 and was the first manufacturer of cash registers under the auspices of his new company, National Cash Register, today known as NCR.

Previous to being NCR's president, Patterson owned a grocery store and a general store in Ohio. At the end of three years of business with annual sales at about $50,000, he found himself "worse off than nothing" and

couldn't account for it. Scrutiny of his store clerks' selling methods made him believe that goods were leaving his store without any money being paid for them. He installed two of Ritty's Incorruptible Cashiers for $100 each and at the end of twelve months cleared $6,000.

During the years 1888 to 1915, the cash register spread to nearly every retail business. Registers were theft deterrents and stores now knew whether they were operating at a profit or a loss. They were manufactured in finishes that included polished brass, nickel-plate, antiqued copper, paint and even silver and gold plate. NCR made brass registers most often and their line of machines grew to represent 95% of the total market. The company ran the largest brass foundry in the world at that time.

John Patterson, owner of NCR, tried to "use every means of legal protection and every competitive technique to weaken the competition or put them out of business." He sued some companies and acquired others, even buying out the Union Cash Register Company because they were too good to be allowed to compete. In 1894 the Heintz Cash Register Company made a machine which instead of "ringing" up a sale used a bird that would cuckoo. NCR silenced the cuckoo. The Hallwood Company suddenly found itself with a low inventory when NCR bought thousands of their old cash registers. In 1892, Patterson sent NCR managers a lead bullet with a horse hair attached with instructions to show Simplex Register owners how worthless their machines were. In 1911, NCR sold their millionth cash register, and reached the 2 millionth mark nine years later.

In 1912, the United States Grand Jury issued an injunction against Patterson and other NCR officials charging them with criminal conspiracy under the Sherman Antitrust Law. The jury said, "Guilty."

NCR entered the computer market in 1957, but was unable to remain competitive as a computer manufacturer. Today, the company focuses on high-end symmetrical multiprocessing and parallel processing computer for commercial data warehousing.

Collections Care in the General Store

The Colvin Run Mill General Store wears several hats. It is a gift shop with interesting and unique items, a "classroom" for grade school children who learn about life in the 19th and 20th century, and a museum showing original household and farm-related items available for purchase at the turn of the 20th century. Many historic items are within reach, so touching is tempting for the public, especially when children are sitting close to the artifacts. In my travels to other historic sites, I have seen few buildings used in so many ways. This unique combination of uses presents challenges to the good stewardship of the collection items. Now that eager school children will soon be at the "classroom" door, it is appropriate to review collections care procedures.

Please do not handle our historic items or allow visitors to handle the artifacts. Please do not place anything on, or lean anything against any collection item. To protect loan items, please do not allow anyone to take flash photos in the general store. If you notice a recurring problem, wonder if something is a collection item, or have any collections-related questions, please talk with Dawn Kehrer. Thank you for your stewardship help.

From the Miller's Corner

Mason has some corrections from the Mill Trivia list included with February's Volunteer Newsletter.

1. When we grind, the waterwheel revolves about once every 6 seconds

which is about 10 rpm – not 6rpm as stated originally. Though the mill is capable of greater speed, 10rpm is the best speed for operating the shaking sieve.

2. The Mill Trivia sheet says that the ideal yield for an Evans' mill is 12-15 barrels or 2,500 to 3,000 lbs. a day. According to W.C. Hughes of *The American Miller & Millwrights Assistant*, a 54 inch stone turning 175 rpm could grind 15 bushels or 900 lbs. of wheat an hour. Commercial mills running 24 hours a day could produce 21,600 lbs of flour, or approximately 77 barrels of finished wheat flour, allowing for 30% bran and waste. This is way more than we would ever attempt to make; our goal is to demonstrate grinding and preserve the machinery, their goal was to make a living.

New Arrival

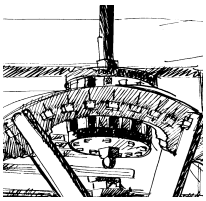
Fred Pretty, Mason's assistant, is a new dad. Ariyana Denise Pretty weighed in at 7 pounds on February 16 – a late valentine. Congratulations to the happy family.

Welcome New Intern

Martha Barroso is our newest dusty and a history intern from West Springfield High School. She has been busy helping with the maple syrup boildowns and is anxiously awaiting the start of grinding season to learn the workings of a grist mill. Martha and her family look forward to meeting other volunteers at the volunteer breakfast.

The Thrust Bearing Replacement
By Mason Maddox

Thanks to Phil Bowling, the staff of the Baltimore Streetcar Museum and Mike Murphy, a problem that would have shut down grinding operations, has been solved.



The thrust bearing holds the stone spindle that moves the stone driver on which the runner stone sits. It is located on the bridgetree in the basement under the grindstones. When Mason Maddox became the miller at Colvin Run Mill, he discovered that the grease from the bridging box contained small pieces of metal, indicating that the thrust bearing was damaged. During the 1968 restoration, the old bearing, that most likely was solid brass or bronze, was probably removed and replaced with a modern ball bearing. The number of extra old bearings found at the mill indicates that the bearings were frequently replaced. Mason consulted a modern bearing specialist to decide what bearing was best for our application. After only 7 years of weekly operation, the recommended bearing broke.

This time, Mason talked with Phil Bowling, a site volunteer who is a mechanic. Phil offered to ask his associates at the Baltimore Streetcar Museum to make a replacement for the defective bearing. They could surely find a much better heavy duty bearing for the job and fit it into our bridging box with a few modifications and no up-front money. The price was right and so Mason gave Phil the go ahead.

Phil and the staff of the Baltimore Streetcar Museum made a very heavy-duty bridging box and fitted it with a large roller bearing to replace the mill's defective thrust bearing. The new bearing is constantly lubricated in a bath of oil like the original bearing would have been, much better than greasing with a grease gun as we were doing. They did all this work for a very reasonable price in time for our spring grinding season.

Eventually, Mason would like to have a solid bearing of original design, but he will have to find the proper deign and see if the bottom of the stone spindle needs to be changed to fit. This will take time for research and implementation and could not be done in time for grinding this spring. The modern bearing will work

while Mason investigates what has to be done to return to the proper type bearing.

With the help of volunteer Mike Murphy who gave up his President's Day holiday, Mason installed the new bearing and trued the stone spindle to the bed stone. The new bearing has moved the stone spindle slightly so Mason will adjust the lesser face gear to the stone nut before the first grinding. Then he plans to tackle the replacement of the failed waterwheel bucket backs. After cleaning the head race, the only hold up to grinding will be Mother Nature. Come on Spring!

On the Road with Bob and Marge

When you think of George Washington, mill owner is not the first description that comes to mind. Marge and Bob explored this facet of George's life in the enclosed article. Washington's mill, near Mt. Vernon, has been restored and operates from spring to fall.

GEORGE WASHINGTON'S GRIST MILL

The mill, which is located on Dogue Run is adjacent to Mount Vernon, is a reconstruction of the original mill built by George Washington. In fact, this was the second mill at Mount Vernon. The 2,000 acres that George inherited from his half brother, Lawrence, included an old mill built in the 1730s. The exact location is not known but it probably was located on Dogue Run opposite the present mill. The original mill took fifty-five minutes to grind a bushel of corn. So, in 1769, Washington built a new mill, selecting the site with the help of John Ballendine, owner of the Occoquan Mills. The mill had two runs of stone, one of which was French Buhrs and the other Cologne stones from Germany. One run of stones was used for grinding wheat and the other for grinding corn.

Typical of Washington's penchant for experimentation, he later installed the latest in mill technology – Oliver Evans' patented millworks, which included a conveyor system that allowed one man to operate a system spread over three floors of the mill. In the fall of 1791, Washington's ledger attests, Evans' brothers superintended the installation of the system.

In l799, Lawrence Lewis, a nephew, rented the mill. When George died later that year, Lewis inherited the mill. In l803 Lewis took out an insurance policy on the mill. The policy stated that it was a 3.5 storied stone building 46' by l6' with an internal l6' breast water wheel. Water was always a problem for the mill as the water in Dogue Run varied greatly. So, the mill only operated about six months out of the year. When Lewis died in l839, his son inherited the mill. In l846 the mill was sold to a group of Quakers. By l850, the walls of the mill had fallen down and the stones were used in the construction of other buildings.

In the 1930s, the mill was restored as part of a government program using a drawing of the mill by Gillingham. During the excavations, a part of the original water wheel was found plus some parts of the gears. The actual water wheel, gears etc. were taken from a mill in Front Royal, which was built around the same time as the Washington mill. On the ground floor are the water wheel, master gear and other gears, which operated the stones. This floor is the heart of the mill. The miller's office is on this floor next to the fireplace. Two grain elevators are also on this floor. One takes the grain to the third floor for storage, and the other transports the meal to the second floor where it is sifted.

The first floor contains the grinding stones and the hopper where the grain is weighed. Also on this floor is a device for packing the flour, which comes from the bolting machine located on the second floor. The third

floor has a Hopper Boy, which is used to cool and dry the flour before it is sifted. This floor was also used for storage.

Since the latest restoration c2000, the mill is operated by Mount Vernon and is open April through October, seven days a week, 10 am to 5 pm.